EUROPE to AMERICA by AEROPLANE in 30 HOURS

CLAUDE GRAHAM-WHITE

"I'LL cross the Atlantic in thirty hours," said Claude Grahame-White, the aviator, and named next summer as the time when he would make good his promise.

He might have said: "I will tempt all the terrors of the unknown. I will accomplish what has never been tried. I will risk my skill against the elements and win. I will take to myself the swiftness of the meteor and the sureness of the seagull. I will defy time, the wind, the weather, the trackless wastes of the sky and the ocean. I will make real the dream of the dreamer."

But Grahame-White is a true Briton and as such has a hearty dislike for the grandiloquent. He is quite content with: "I'll cross the Atlantic in thirty hours"—as if the feat were the most matter-of-fact performance in the world—and the chances are that he regards it a good deal in that light.

At first hearing, it sounds like an idle boast, but those who have followed the career of this eminently shrewd, clear-headed and capable airman know that he is neither a boaster nor a visionary. If he says he will do a thing it is certain that he believes firmly that he can—and believes it because he has studied his facts and tested his theories.

It is but a short look back to the beginnings of the aeroplane and in the brief time that that wonderful machine has been in the hands of men it has performed the very things that skeptics have declared impossible. It seems almost certain that at a time not remote someone will make the perilous trip overseas. And why not Grahame-White?

To the average earth-man who is satisfied never to rise above the top stories of an office building the attempt, even under the best of conditions, appears reckless to the point of foolhardiness. Not so to the aviator. "Give me the kind of a machine I'm thinking of," he remarks, "and the transatlantic trip would be just so much duration flying—plain sailing."

Just there lies the nub of the question of air navigation from Europe to America—in the machines. They must first of all have speed, great speed; they must have a lifting capacity enough to carry the required amount of fuel, they must have motors capable of standing the strain of terrific and stupendous distance, they must have instruments that will locate the course with accuracy.

All those elements must have been considered long and carefully by Grahame-White before he made his recent announcment. He must be satisfied that he has an aeroplane that fulfils all the conditions. So far, little detail has leaked out as to the manner of equipment he will use. It is known only that he is building a machine which will carry four engines, arranged in independent pairs and each rated at 250 horsepower. He has said that he is convinced that he can show enough lifting capacity to carry the required fuel and enough speed to rush him to these shores in thirty hours.

That may seem simple to the unthinking, but consider. Roughly speaking, it is 3,000 miles from coast to coast and at Grahame-White's reckoning of thirty hours that means that he has a machine which he trusts for at least one hundred miles an hour, minute after minute without interruption

What course he will choose has not yet developed. He has the whole great ocean to choose from. It has been hinted that the steamship lanes are the natural path for the adventurer to give some measure of protection in case of accidents. If he chooses that from Queenstown to Sandy Hook lightship he must traverse 2,800 miles; if from Plymouth to Sandy Hook, 2,962 miles; if from Southampton to Sandy Hook, 3,100; if from Havre to Sandy Hook, 3,170 miles; and if from Cherbourg, 3,644. The Mauretania has made the passage in four days ten hours and forty-one minutes. The aviator proposes to clip at one swoop 6,341 minutes from that record.

To be sure there are other roads which are said to be safer. There is that which leads from the Azores to the Bermudas, one that allows for two relatively short hops and a long one from mainland to mainland. Then there is that other one favored by those who have planned out the course not for an aeroplane but for a power dirigible.

This second course is practically the same over which Columbus was wafted across by the kindly trade winds centuries ago. From a meteorological standpoint it is said to be the best. It lies from Cadiz to Teneriffe, a distance of 807 miles; from Teneriffe to Porto Rico, a distance of 3,219 miles; from Porto Rico to Havana, distance of 1,124 miles; and thence to the mainland. The course lies in a zone varying little from twenty degrees north latitude and in the winter and spring offers fair weather and a wind with a velocity of fourteen to sixteen miles an hour.

The matter of wind, however, seems to have troubled Grahame-White little. It is probable that he will select one of the northerly courses and it is probable that he may fly even as far north as Labrador. By choosing that as a point of landing and Ireland as point of starting, he might reduce his distance by hundreds of miles.

Whatever his course, however, he must have speed. Even at his own estimate of thirty hours, the nervous strain of guiding an aeroplane for that length of time without sleep would be terrific and would increase immensely with every added hour.

Grahame-White has always been a believer in the speed possibilities of his air crafts. Some time ago he held that 100 miles an hour was no very remarkable rate. "Friends of mine," he said, "who are experts on the scientific aspects of airmanship, predict that eventually speeds of 200 miles and 300 miles an hour will be possible. At this, one's imagination is apt to reel, but this much is certain: If the flying machine is to become of real importance, and not remain always a sporting toy, it must be speedier than any method of transit on land."

Perhaps he is convinced that his new four-motor arrangement will give him 100 miles continuously. He must have that to make his journey in the time he has set. Jules Vedrines has flown at the rate of a trifle better than 105 miles an hour and George Fourny holds a record of fifteen hours of continuous flight. Nothing like a union of the two records has yet been known and if Grahame-White succeeds according to his promise he will have approached one and bettered the other.

It may seem strange, but to the aviator the matter of swiftness is a secondary consideration in the problem. To him the lifting power is the thing that counts. One prominent aviator figured the other day that on such a trip as Grahame-White plans he would under known conditions have to carry fuel amounting in weight to more than 4,000 pounds.

It is estimated that an average aeroplane motor with a speed capacity of sixty miles an hour will use on an average five gallons of gasoline an hour and one gallon of lubricating oil. Both these weigh approximately six pounds a gallon. Grahame-White is to have four motors and stay in the air thirty hours. The result is simple figuring.

The main difficulty, then, will be in producing an aeroplane which has the power to make a tremendous lift without materially reducing its speed. It is generally conceded that the type of airship used will be necessarily a biplane as the dainty monoplane is not a weight carrier. Even the biplane has not yet shown power of moving the tremendous weight which it is estimated the cross-seas adventurer must carry.

In France there is a record of a machine of this sort lifting thirteen people from the ground. That, however, was a mere hop and not a sustained flight. At best only 1,950 pounds of human freight was thus carried, if each person is allowed 150 pounds.

Whatever improvements Grahame-White may have in his new machine it is certain that he must have unusual lifting power even if he has discovered some means of cutting his oil and gasoline requirements. He will have to have a tremendous drive to overcome the drag of the weight in his storage tanks.

To achieve what he has set out to do he will have to secure a machine of a type superior to anything that has been so far seen in motor equipment, in strength, steadiness, and speed. His motors will have to better the continuous flight record by half, equal the speed record and beat the lifting record by long odds.

Granted, however, that he will have at his command a machine equal to all emergencies he will still have the ocean to cross. That in the estimation of the aviator is the least of his troubles. Philip W. Page, aviator, expert in the management of hydroplanes, and one of the foremost cross-water flyers, expressed the views of many of his fellow-airmen in discussing this phase of the proposed flight the other afternoon.

"Of course," he said, "there is a possibility of making a flight from continent to continent. Such a flight, however, presupposes an aeroplane theoretically perfect for the purpose. With such a machine the journey would be by no means as terrifying as most people imagine. If the aviator were sure of staying in the air and making the required speed, the rest under normal conditions would be one of the simplest kinds of flying—straightaway over an unimpeded course.

"Contrary to the general belief, he would have conditions better than those on land. The winds in the summer should be steady and never very strong. He would encounter no buildings, trees or abrupt changes in the face of the country to split his air currents. Almost any aviator will tell you that he prefers a forty-mile steady to a fifteen-mile puffy wind.

"The air-hole theory has come to be a good deal of a myth, but there are still troublesome up and down trends of the atmosphere which lend no little difficulty to land flying. These are caused in a large measure from sudden obstruction to air currents and from radiation.

"The atmosphere over the ocean is not subject to these obstructions nor is it affected by any such radiation as we meet with over land on a hot day. I should say that his difficulty would not lie primarily with atmospheric conditions, provided he had reasonably settled weather, but rather with the possible unsureness of his aeroplane, possible trouble with his motor and the intricacies of navigation."

Given fair weather and a machine which will make the speed he hopes, the actual physical demand upon Grahame-White would not be a severe one. The control of a machine running in steady currents would not be a trying one. Plain flying even at a great speed does not call for any very large amount of exertion.

On the other hand the nervous strain would be tremendous. It is hard to imagine the state of mind of a man hurled into the unknown with only a slender fabric of metal, wood and cloth between him and death. It is equally difficult to conceive of what thirty hours or more of catapulting across mile after mile of ocean at 100 miles an hour would mean. At the least it would necessitate a tension the like of which few men have ever experienced.

PENALTIES FOR TOMMY ATKINS.

How British Soldier Is Punished for Offenses In Time of War.

When a soldier proceeds on active service he has to mind his "p's" and "q's," for offenses which in peace time would be lightly punished may in the field render him liable to death, says London Tit-Bits. In time of peace, if Tommy Atkins, being on sentry go, sleeps or is drunk on his post or quits it without being properly relieved, he will probably get off with a short dose of imprisonment or perhaps of "detention" only. On active service the penalty for these offenses is death.

It would not usually be enforced nowadays, except for a repeated offense or where, owing to the prevalence of misbehavior among sentries, it is necessary to "make an example," but still the liability to death is there.

In peace the maximum penalty for desertion is two years' imprisonment, with or without hard labor, but in practice a first offense will get a short term of imprisonment. On active service the deserter takes the risk of death if recaptured and if the offense is committed actually in face of the enemy he will probably be shot.

Similarly, acts of insubordination which in the ordinary way would be comparatively venial offenses become punishable by death on active service. In passing it may be mentioned that even in peace an insubordinate soldier may be sentenced to death if convicted by a general court-martial on one or another of the following charges: Striking or using or offering any violence to his superior officer, being in the execution of his office; or disobeying, in such manner as to show a willful defiance of authority, any lawful command given personally by his superior officer in the execution of his office, whether the same is given orally or in writing or by signal or otherwise.

In peace, however, the maximum penalty has not been inflicted for these offenses for many years.

Active service brings into being offenses which practically do not exist in peace. One of the most serious of crimes peculiar to active service is "forcing a safeguard." The commander of an invading army will often detach parties of his own men to protect the persons and property of civilian inhabitants from violence by his own side. To force such a safeguard almost invariably means death.

Breaking into a house or any other place in search of plunder may also mean death, even when there is no safeguard; but as a rule a lesser penalty would be inflicted. It depends a good deal on the commander. Some generals wink at looting; others—Lord Roberts, for one—are very severe on it.

During the Boer war more than one of our men was executed for the sake of a Boer fowl or bottle of "square-face." On one occasion only the readiness of an Irish "Tommy" saved him from the firing party or the gallows. He was caught with a couple of fowls under his coat and by no less a personage than "Bobs" himself, out riding with his staff.

Asked for an explanation, he instantly replied that he had caught the fowls running loose on the veldt and that, hearing the commander in chief was on short rations, he was on his way to ask his lordship to accept them as a present. The fowls and the explanation were accepted.

It is possible for a soldier to show cowardice in time of peace. In such a case he would probably be charged with an act or conduct "to the prejudice of good order and military discipline," sentenced to a stiff dose of imprisonment and to be "discharged with ignominy."

On active service any act of cowardice is punishable by death, while a soldier who, "in action or previously to going into action, uses words calculated to create unnecessary alarm or despondency," is liable to penal servitude.

Who carries out a sentence of death on active service? This is the duty of the provost-marshal, who, with a large force, is an officer of fairly high rank. He is responsible for making all arrangements for the execution and, if necesary, he must himself act as executioner. In the Boer war one provost-marshal was Major (now Colonel) R. M. Poore, the famous Hampshire cricketer.

A Natural Mistake.

"What do you suppose the financial editor has done?"

"What?"

"He has put the article called Stock Phrases under the head of Market Quotations."

SHE KNEW.

"Big men are the best lovers."

"How do you figure that?"

"Why, they're so demonstrative in their love-making."

"Never judge a lover by his signs."

Mind Reader.

First Straphanger—Look out! You're treading on my feet!

Second Straphanger—Beg pardon! I also prefer to ride in a cab.—Judge.

Question.

"Now a big Chicago firm complains that its girls will not stay single."

"Well, will they stay married?"

Early Training.

Willis—Is that new young preacher you hired fresh from college up to date?

Gillis—You bet. He called out the Easter choir squad last Sunday, and has ordered practice behind closed doors.—Puck.

A woman always seems to think a man can make over his silk hat as easily as she can make a new bonnet out of the one she wore last year.

His Guess.

"Wot's inflated currency,' Bill?"

"Dunno! 'less it's money wot's been 'blown in.'"—Boston Transcript.

And a baby would rather go to sleep than listen to a lullaby.

No Money, No Marriage.

"A fortune teller told me that you are going to marry me," said the young man with the prominent socks.

"Did she also tell you that you are going to inherit a very large fortune?" inquired the girl with the matted hair.

"She didn't say anything about a fortune."

"Then she is not much of a fortune-teller, and you had better not place any reliance in anything she says."—Washington Herald.

Words of the Aviator.

"So you took a flyer in the stock market?"

"Yes," answered the regretful-looking man, "and hit an air pocket."

Once in a great while a man comes home as early as his wife thinks he ought to, or the postman brings her a letter that she expects.

It takes a good pugilist or a poor minister to put his man to sleep.